

=> file biosis caba caplus embase japio lifesci medline scisearch  
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FILE 'SCISEARCH' ENTERED AT 10:02:07 ON 22 DEC 2009  
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=> e andersen peter/au

E1	2	ANDERSEN PET KRAGH/AU
E2	1	ANDERSEN PETE/AU
E3	837 -->	ANDERSEN PETER/AU
E4	17	ANDERSEN PETER A/AU
E5	1	ANDERSEN PETER A DR/AU
E6	1	ANDERSEN PETER A DR PROF/AU
E7	6	ANDERSEN PETER ANDREAS/AU
E8	18	ANDERSEN PETER B/AU
E9	1	ANDERSEN PETER BJOERN/AU
E10	96	ANDERSEN PETER C/AU
E11	2	ANDERSEN PETER C III/AU
E12	1	ANDERSEN PETER CHRISTIAN/AU

=> s e1-e12 and (Rv1036c or Rv2348c or Rv2653c or Rv2654c or Rv3020c or Rv3444c  
or Rv3445c or Rv3890c or Rv3891c or Rv3904c or Rv3905c)

L1 2 ("ANDERSEN PET KRAGH"/AU OR "ANDERSEN PETE"/AU OR "ANDERSEN PETE  
R"/AU OR "ANDERSEN PETER A"/AU OR "ANDERSEN PETER A DR"/AU OR  
"ANDERSEN PETER A DR PROF"/AU OR "ANDERSEN PETER ANDREAS"/AU OR  
"ANDERSEN PETER B"/AU OR "ANDERSEN PETER BJOERN"/AU OR "ANDERSEN  
PETER C"/AU OR "ANDERSEN PETER C III"/AU OR "ANDERSEN PETER  
CHRISTIAN"/AU) AND (RV1036C OR RV2348C OR RV2653C OR RV2654C OR  
RV3020C OR RV3444C OR RV3445C OR RV3890C OR RV3891C OR RV3904C  
OR RV3905C)

=> dup rem l1

PROCESSING COMPLETED FOR L1

L2 2 DUP REM L1 (0 DUPLICATES REMOVED)

=> d 1-

YOU HAVE REQUESTED DATA FROM 2 ANSWERS - CONTINUE? Y/(N):y

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2005:589018 CAPLUS <<LOGINID::20091222>>  
 DN 143:114037  
 TI Improved tuberculosis vaccines comprising fusion proteins of Mycobacterial  
 antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\*  
 IN Jes, Dietrich; \*\*\*Andersen, Peter\*\*\* ; Aagaard, Claus  
 PA Statens Serum Institut, Den.  
 SO PCT Int. Appl., 85 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005061534	A2	20050707	WO 2004-DK907	20041222
	WO 2005061534	A3	20080110		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,			SM
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AP, EA, EP, OA			
PRAI	DK 2003-1942	A	20031223		
OSC.G	1	THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)			

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2004:59568 CAPLUS <<LOGINID::20091222>>  
 DN 140:127185  
 TI Antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis and treatment  
 IN \*\*\*Andersen, Peter\*\*\* ; Skjot, Rikke Louise Vinther; Okkels, Li Mei Meng; Brock, Inger; Oettinger, Thomas  
 PA Den.  
 SO U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 804,980.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20040013685	A1	20040122	US 2001-872505	20010601
	EP 1449922	A2	20040825	EP 2004-76605	19980401
	EP 1449922	A3	20041117		
	EP 1449922	B1	20070815		
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY			
	WO 2001004151	A2	20010118	WO 2000-DK398	20000713
	WO 2001004151	A3	20010712		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,			

	LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,	
	SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,	
	YU, ZA, ZW	
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,	
	DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,	
	CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG	
US	20030147897	A1 20030807 US 2001-804980 20010313
US	6991797	B2 20060131
AU	2002301509	A1 20030306 AU 2002-301509 20021010
AU	2006252186	A2 20070118 AU 2006-252186 20061221
AU	2006252186	A1 20070118
JP	2008142079	A 20080626 JP 2007-299636 20071119
JP	2008301817	A 20081218 JP 2008-131389 20080519
PRAI	DK 1997-1277	A 19971110
	US 1998-70488P	P 19980105
	US 1998-246191	B2 19981230
	DK 1999-1020	A 19990713
	US 1999-144011P	P 19990715
	US 2000-615947	A2 20000713
	WO 2000-DK398	A2 20000713
	US 2001-804980	A2 20010313
	DK 1993-798	A 19930702
	US 1993-123182	B2 19930920
	WO 1994-DK273	A2 19940701
	US 1995-465640	A1 19950605
	DK 1997-376	A 19970402
	US 1997-44624P	P 19970418
	US 1998-50739	A3 19980330
	EP 1998-913536	A3 19980401
	JP 1998-541074	A3 19980401
	AU 1998-94338	A3 19981008
	WO 1998-DK438	W 19981008
	US 1999-289388	B2 19990412
	US 2001-791171	A2 20010220
	AU 2002-301509	A3 20021010

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

=> e skjot rikke/au

E1	6	SKJOT R L V/AU
E2	10	SKJOT RASMUSSEN LINE/AU
E3	1 -->	SKJOT RIKKE/AU
E4	3	SKJOT RIKKE L V/AU
E5	17	SKJOT RIKKE LOUISE VINTHER/AU
E6	1	SKJOT V/AU
E7	2	SKJOTH C/AU
E8	27	SKJOTH C A/AU
E9	5	SKJOTH C AMBELAS/AU
E10	6	SKJOTH CARSTEN A/AU
E11	26	SKJOTH CARSTEN AMBELAS/AU
E12	30	SKJOTH F/AU

=> s e1-e5 and (Rv1036c or Rv2348c or Rv2653c or Rv2654c or Rv3020c or Rv3444c or Rv3445c or Rv3890c or Rv3891c or Rv3904c or Rv3905c)

L3 1 ("SKJOT R L V"/AU OR "SKJOT RASMUSSEN LINE"/AU OR "SKJOT RIKKE"/  
AU OR "SKJOT RIKKE L V"/AU OR "SKJOT RIKKE LOUISE VINTHER"/AU)  
AND (RV1036C OR RV2348C OR RV2653C OR RV2654C OR RV3020C OR RV34

44C OR RV3445C OR RV3890C OR RV3891C OR RV3904C OR RV3905C)

=> d

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2004:59568 CAPLUS <<LOGINID::20091222>>  
DN 140:127185  
TI Antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis  
and treatment  
IN Andersen, Peter; \*\*\*Skjot, Rikke Louise Vinther\*\*\* ; Okkels, Li Mei  
Meng; Brock, Inger; Oettinger, Thomas  
PA Den.  
SO U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 804,980.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 20040013685	A1	20040122	US 2001-872505	20010601
	EP 1449922	A2	20040825	EP 2004-76605	19980401
	EP 1449922	A3	20041117		
	EP 1449922	B1	20070815		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	WO 2001004151	A2	20010118	WO 2000-DK398	20000713
	WO 2001004151	A3	20010712		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 20030147897	A1	20030807	US 2001-804980	20010313
	US 6991797	B2	20060131		
	AU 2002301509	A1	20030306	AU 2002-301509	20021010
	AU 2006252186	A2	20070118	AU 2006-252186	20061221
	AU 2006252186	A1	20070118		
	JP 2008142079	A	20080626	JP 2007-299636	20071119
	JP 2008301817	A	20081218	JP 2008-131389	20080519
PRAI	DK 1997-1277	A	19971110		
	US 1998-70488P	P	19980105		
	US 1998-246191	B2	19981230		
	DK 1999-1020	A	19990713		
	US 1999-144011P	P	19990715		
	US 2000-615947	A2	20000713		
	WO 2000-DK398	A2	20000713		
	US 2001-804980	A2	20010313		
	DK 1993-798	A	19930702		
	US 1993-123182	B2	19930920		
	WO 1994-DK273	A2	19940701		
	US 1995-465640	A1	19950605		
	DK 1997-376	A	19970402		
	US 1997-44624P	P	19970418		

US 1998-50739	A3	19980330
EP 1998-913536	A3	19980401
JP 1998-541074	A3	19980401
AU 1998-94338	A3	19981008
WO 1998-DK438	W	19981008
US 1999-289388	B2	19990412
US 2001-791171	A2	20010220
AU 2002-301509	A3	20021010

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

=> s Rv1036c or Rv2348c or Rv2653c or Rv2654c or Rv3020c or Rv3444c or Rv3445c  
or Rv3890c or Rv3891c or Rv3904c or Rv3905c

L4 70 RV1036C OR RV2348C OR RV2653C OR RV2654C OR RV3020C OR RV3444C  
OR RV3445C OR RV3890C OR RV3891C OR RV3904C OR RV3905C

=> dup rem l4

PROCESSING COMPLETED FOR L4

L5 9 DUP REM L4 (61 DUPLICATES REMOVED)

=> d bib ab kwic 1-

YOU HAVE REQUESTED DATA FROM 9 ANSWERS - CONTINUE? Y/(N):y

L5 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 1

AN 2009:720278 CAPLUS <<LOGINID::20091222>>

Correction of: 2009:592725

DN 151:31776

Correction of: 150:537909

TI Multimers of MHC complexed with Mycobacterium tuberculosis peptide as  
vaccine and for diagnosis, prognosis and therapy of tuberculosis

IN Scholler, Jorgen; Brix, Liselotte; Pedersen, Henrik; Jakobsen, Tina

PA Dako Denmark A/S, Den.

SO PCT Int. Appl., 1642pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 27

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2009039854	A2	20090402	WO 2008-XI339	20080929
	W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,				
	CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES,				
	FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,				
	KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,				
	ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,				
	PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ,				
	TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,				
	IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,				
	TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,				
	TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,				
	AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI DK 2007-1395 A 20070927

US 2007-960394P P 20070927

AB The present invention relates to MHC-peptide complexes and uses thereof in  
the diagnosis of, treatment of or vaccination against a disease in an  
individual. More specifically the invention discloses MHC complexes

comprising Mycobacterium tuberculosis antigenic peptides and uses thereof. [This abstr. record is one of 51 records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints].

IT Antigens

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( \*\*\*Rv1036c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( \*\*\*Rv2348c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( \*\*\*Rv2653c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( \*\*\*Rv2654c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( \*\*\*Rv3020c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( \*\*\*Rv3444c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( \*\*\*Rv3445c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( \*\*\*Rv3890c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( \*\*\*Rv3891c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for

diagnosis, prognosis and therapy of tuberculosis)

IT Antigens  
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 ( \*\*\*Rv3904c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

IT Antigens  
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 ( \*\*\*Rv3905c\*\*\* ; multimers of MHC antigen complexed with Mycobacterium tuberculosis immunogenic peptides as vaccine and for diagnosis, prognosis and therapy of tuberculosis)

L5 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2009:143400 CAPLUS <<LOGINID::20091222>>

DN 150:207384

TI Primers for the amplification of polymorphic genes of Mycobacterium tuberculosis for identification of subspecies

IN Massire, Christian; Sampath, Rangarajan; Blyn, Lawrence B.; Ecker, David J.

PA Ibis Biosciences, Inc., USA

SO PCT Int. Appl., 169pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2009017902	A2	20090205	WO 2008-US67911	20080623
	WO 2009017902	A3	20091015		
	W:	AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			

PRAI US 2007-945850P P 20070622

US 2008-37884P P 20080319

AB Primers directed against a no. of highly variable genes of Mycobacterium tuberculosis are described for use in the identification and typing of subspecies. Amplicons prep'd. with these primers may be analyzed by size or by base compn. Drug-resistant strains of Mycobacterium tuberculosis may be identified in human clin. samples and as such, provide for methods of treatment of humans infected with drug resistant strains of Mycobacterium tuberculosis. Development of the informative primer pairs, target genes, and anal. methods, is demonstrated.

IT Gene, microbial

RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

( \*\*\*rv2348c\*\*\* , in typing of Mycobacterium tuberculosis; primers

for amplification of polymorphic genes of Mycobacterium tuberculosis  
for identification of subspecies)

L5 ANSWER 3 OF 9 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN  
DUPLICATE 2  
AN 2008:559383 BIOSIS <<LOGINID::20091222>>  
DN PREV200800559382  
TI Molecular features governing the stability and specificity of functional  
complex formation by Mycobacterium tuberculosis CFP-10/ESAT-6 family  
proteins.  
AU Lightbody, Kirsty L.; Ilghari, Dariush; Waters, Lorna C.; Carey, Gemma;  
Bailey, Mark A.; Williamson, Richard A.; Renshaw, Philip S.; Carr, Mark D.  
[Reprint Author]  
CS Univ Leicester, Dept Biochem, Henry Wellcome Bldg, Leicester LE1 9HN,  
Leics, UK  
mdc12@le.ac.uk  
SO Journal of Biological Chemistry, (JUN 20 2008) Vol. 283, No. 25, pp.  
17681-17690.  
CODEN: JBCHA3. ISSN: 0021-9258.  
DT Article  
LA English  
ED Entered STN: 15 Oct 2008  
Last Updated on STN: 15 Oct 2008  
AB The Mycobacterium tuberculosis complex CFP-10/ESAT-6 family proteins play  
essential but poorly defined roles in tuberculosis pathogenesis. In this  
article we report the results of detailed spectroscopic studies of several  
members of the CFP10/ESAT-6 family. This work shows that the  
CFP-10/ESAT-6 related proteins, Rv0287 and Rv0288, form a tight 1:1  
complex, which is predominantly helical in structure and is predicted to  
closely resemble the complex formed by CFP-10 and ESAT-6. In addition,  
the Rv0287.Rv0288 complex was found to be significantly more stable to  
both chemical and temperature induced denaturation than CFP-10.ESAT-6.  
This approach demonstrated that neither Rv0287.Rv0288 nor the  
CFP-10.ESAT-6 complexes are destabilized at low pH (4.5), indicating that  
even in low pH environments, such as the mature phagosome, both  
Rv0287.Rv0288 and CFP-10.ESAT-6 undoubtedly function as complexes rather  
than individual proteins. Analysis of the structure of the CFP-10.ESAT-6  
complex and optimized amino acid sequence alignments of M. tuberculosis  
CFP-10/ESAT-6 family proteins revealed that residues involved in the  
intramolecular contacts between helices are conserved across the CFP-10/  
ESAT-6 family, but not those involved in primarily intermolecular  
contacts. This analysis identified the molecular basis for the  
specificity and stability of complex formation between CFP-10/ ESAT-6  
family proteins, and indicates that the formation of functional complexes  
with key roles in pathogenesis will be limited to genome partners, or very  
closely related family members, such as Rv0287/Rv0288 and Rv3019c/  
\*\*\*Rv3020c\*\*\* .  
AB. . . key roles in pathogenesis will be limited to genome partners, or  
very closely related family members, such as Rv0287/Rv0288 and Rv3019c/  
\*\*\*Rv3020c\*\*\* .  
  
L5 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN  
AN 2005:589018 CAPLUS <<LOGINID::20091222>>  
DN 143:114037  
TI Improved tuberculosis vaccines comprising fusion proteins of Mycobacterial  
antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\*  
IN Jes, Dietrich; Andersen, Peter; Aagaard, Claus



PA Statens Serum Institut, Den.

SO PCT Int. Appl., 85 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005061534	A2	20050707	WO 2004-DK907	20041222
	WO 2005061534	A3	20080110		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AP, EA, EP, OA			

PRAI DK 2003-1942 A 20031223

AB The invention is related to an immunogenic compn., vaccine or pharmaceutical compn. for preventing, boosting or treating infection caused by a species of the tuberculosis complex (M. tuberculosis, M. bovis, M. africanum, M. microti). The immunogenic compn., vaccine or pharmaceutical compn. comprise a fusion polypeptide, the units of the fusion polypeptide being M. tuberculosis antigens. Further, the invention is relates to the use of a vaccine comprising a fusion polypeptide sequence or nucleic acid sequence of the invention given at the same time as BCG, either mixed with BCG or administered sep. at different sites or routes for prepg. said immunogenic compn., vaccine, or pharmaceutical compn. Further, the invention is related to the use of a vaccine comprising a fusion polypeptide sequence or nucleic acid sequence given as BCG booster vaccine.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

TI Improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\*

ST Mycobacterium antigen Ag85A Ag85B TB104 ORF2c Rv0285 Rv0287 \*\*\*Rv1036c\*\*\* ; chimeric protein Mycobacterium antigen BCG tuberculosis vaccine

IT Antigens

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(Ag85A; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Antigens

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(Ag85B; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Proteins

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);

PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (ORF2c; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Antigens  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (Rv0285; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Antigens  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (Rv0287; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Antigens  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 ( \*\*\*Rv1036c\*\*\* ; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Antigens  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (TB10.4; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Animals  
 DNA sequences  
 Molecular cloning  
 Mycobacterium  
 Mycobacterium BCG  
 Mycobacterium africanum  
 Mycobacterium bovis  
 Mycobacterium microti  
 Mycobacterium tuberculosis  
 Protein sequences  
 Tuberculosis  
 Vaccines  
 (improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Fusion proteins (chimeric proteins)  
 Nucleic acids  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Drug delivery systems

(injections, i.m.; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Drug delivery systems  
(injections, s.c.; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Drug delivery systems  
(intradermal; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Drug delivery systems  
(mucosal; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Vaccines  
(synthetic; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT Drug delivery systems  
(transdermal; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT 857713-16-7P 857713-17-8P 857713-18-9P 857713-19-0P 857713-20-3P  
857713-21-4P 857713-22-5P 857713-23-6P 857713-24-7P 857713-25-8P  
857713-26-9P 857713-27-0P  
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(amino acid sequence; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT 857713-04-3P 857713-05-4P 857713-06-5P 857713-07-6P 857713-08-7P  
857713-09-8P 857713-10-1P 857713-11-2P 857713-12-3P 857713-13-4P  
857713-14-5P 857713-15-6P  
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP  
(Preparation); USES (Uses)  
(nucleotide sequence; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

IT 857715-99-2 857716-00-8 857716-01-9 857716-02-0 857716-03-1  
857716-04-2 857716-05-3  
RL: PRP (Properties)  
(unclaimed protein sequence; improved tuberculosis vaccines comprising fusion proteins of Mycobacterial antigens Ag85A, Ag85B, TB10.4, ORF2c, Rv0285, Rv0287 and \*\*\*Rv1036c\*\*\* )

L5 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:59568 CAPLUS <<LOGINID::20091222>>

DN 140:127185

TI Antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis and treatment

IN Andersen, Peter; Skjot, Rikke Louise Vinther; Okkels, Li Mei Meng; Brock, Inger; Oettinger, Thomas

PA Den.

SO U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part of U.S. Ser. No. 804,980.

CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20040013685	A1	20040122	US 2001-872505	20010601
	EP 1449922	A2	20040825	EP 2004-76605	19980401
	EP 1449922	A3	20041117		
	EP 1449922	B1	20070815		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	WO 2001004151	A2	20010118	WO 2000-DK398	20000713
	WO 2001004151	A3	20010712		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 20030147897	A1	20030807	US 2001-804980	20010313
	US 6991797	B2	20060131		
	AU 2002301509	A1	20030306	AU 2002-301509	20021010
	AU 2006252186	A2	20070118	AU 2006-252186	20061221
	AU 2006252186	A1	20070118		
	JP 2008142079	A	20080626	JP 2007-299636	20071119
	JP 2008301817	A	20081218	JP 2008-131389	20080519
PRAI	DK 1997-1277	A	19971110		
	US 1998-70488P	P	19980105		
	US 1998-246191	B2	19981230		
	DK 1999-1020	A	19990713		
	US 1999-144011P	P	19990715		
	US 2000-615947	A2	20000713		
	WO 2000-DK398	A2	20000713		
	US 2001-804980	A2	20010313		
	DK 1993-798	A	19930702		
	US 1993-123182	B2	19930920		
	WO 1994-DK273	A2	19940701		
	US 1995-465640	A1	19950605		
	DK 1997-376	A	19970402		
	US 1997-44624P	P	19970418		
	US 1998-50739	A3	19980330		
	EP 1998-913536	A3	19980401		
	JP 1998-541074	A3	19980401		
	AU 1998-94338	A3	19981008		
	WO 1998-DK438	W	19981008		
	US 1999-289388	B2	19990412		
	US 2001-791171	A2	20010220		
	AU 2002-301509	A3	20021010		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention is based on the identification and characterization of 3 antigens, including \*\*\*Rv2653c\*\*\* , \*\*\*Rv2654c\*\*\* and RD1-ORF5, from Mycobacterium tuberculosis. The invention is directed to the polypeptides and immunol. active fragments thereof, the genes encoding

them, immunol. compns. such as diagnostic reagents contg. the polypeptides. The invention related to diagnosing tuberculosis caused by virulent mycobacteria in an animal, including a human being. The invention related to treating tuberculosis using antigens isolated from Mycobacterium tuberculosis.

AB The present invention is based on the identification and characterization of 3 antigens, including \*\*\*Rv2653c\*\*\* , \*\*\*Rv2654c\*\*\* and RD1-ORF5, from Mycobacterium tuberculosis. The invention is directed to the polypeptides and immunol. active fragments thereof, the genes encoding. . .

IT Antigens  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 ( \*\*\*Rv2653c\*\*\* ; antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis and treatment)

IT Antigens  
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 ( \*\*\*Rv2654c\*\*\* ; antigens from Mycobacterium as vaccine and uses in tuberculosis diagnosis and treatment)

L5 ANSWER 6 OF 9 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN DUPLICATE 3

AN 2004:452535 BIOSIS <<LOGINID::20091222>>

DN PREV200400456980

TI Characterisation of complex formation between members of the Mycobacterium tuberculosis complex CFP-10/ESAT-6 protein family: towards an understanding of the rules governing complex formation and thereby functional flexibility.

AU Lightbody, Kirsty L.; Renshaw, Philip S.; Collins, Michelle L.; Wright, Rebecca L.; Hunt, Debbie M.; Gordon, Stephen V.; Hewinson, R. Glyn; Buxton, Roger S.; Williamson, Richard A.; Carr, Mark D. [Reprint Author]

CS Dept Biochem, Univ Leicester, Adrian Bldg, Univ Rd, Leicester, Leics, LE1 7RH, UK  
 mdcl2@le.ac.uk

SO FEMS Microbiology Letters, (September 1 2004) Vol. 238, No. 1, pp. 255-262. print.  
 CODEN: FMLED7. ISSN: 0378-1097.

DT Article

LA English

ED Entered STN: 24 Nov 2004  
 Last Updated on STN: 24 Nov 2004

AB We have previously shown that the secreted M. tuberculosis complex proteins CFP-10 and ESAT-6 form a tight, 1:1 complex, which may represent their functional form. In the work reported here a combination of yeast two-hybrid and biochemical analysis has been used to characterise complex formation between two other pairs of CFP-10/ESAT-6 family proteins (Rv0287/Rv0288 and Rv3019c/ \*\*\*Rv3020c\*\*\* ) and to determine whether complexes can be formed between non-genome paired members of the family. The results clearly demonstrate that Rv0287/Rv0288 and Rv3019c/3020c form tight complexes, as initially observed for CFP-10/ ESAT-6. The closely related Rv0287/Rv0288 and Rv3019c/ \*\*\*Rv3020c\*\*\* proteins are also able to form non-genome paired complexes (Rv0287/Rv3019c and Rv0288/ \*\*\*Rv3020c\*\*\* ), but are not capable of binding to the more distantly related CFP-10/ESAT-6 proteins. Copyright 2004 Federation of European

Microbiological Societies. Published by Elsevier B.V. All rights reserved.

AB. . . and biochemical analysis has been used to characterise complex formation between two other pairs of CFP-10/ESAT-6 family proteins (Rv0287/Rv0288 and Rv3019c/ \*\*\*Rv3020c\*\*\* ) and to determine whether complexes can be formed between non-genome paired members of the family. The results clearly demonstrate that Rv0287/Rv0288 and Rv3019c/3020c form tight complexes, as initially observed for CFP-10/ ESAT-6. The closely related Rv0287/Rv0288 and Rv3019c/ \*\*\*Rv3020c\*\*\* proteins are also able to form non-genome paired complexes (Rv0287/Rv3019c and Rv0288/ \*\*\*Rv3020c\*\*\* ), but are not capable of binding to the more distantly related CFP-10/ESAT-6 proteins. Copyright 2004 Federation of European Microbiological Societies.. . .

L5 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:490054 CAPLUS <<LOGINID::20091222>>

DN 139:130735

TI The senX3-regX3 two-component regulatory system of Mycobacterium tuberculosis is required for virulence

AU Parish, Tanya; Smith, Debbie A.; Roberts, Gretta; Betts, Joanna; Stoker, Neil G.

CS Department of Medical Microbiology, Barts and the London, Queen Mary's School of Medicine and Dentistry, London, E1 2AD, UK

SO Microbiology (Reading, United Kingdom) (2003), 149(6), 1423-1435  
CODEN: MROBEO; ISSN: 1350-0872

PB Society for General Microbiology

DT Journal

LA English

AB Two-component regulatory systems have been widely implicated in bacterial virulence. To investigate the role of one such system in Mycobacterium tuberculosis, a strain was constructed in which the senX3-regX3 system was deleted by homologous recombination. The mutant strain (Tame15) showed a growth defect after infection of macrophages and was attenuated in both immunodeficient and immunocompetent mice. Competitive hybridization of total RNA from the wild-type and mutant strains to a whole-genome microarray was used to identify changes in gene expression resulting from the deletion. One operon was highly up-regulated in the mutant, indicating that regX3 probably has a role as a repressor of this operon. Other genes which were up- or down-regulated were also identified. Many of the genes showing down-regulation are involved in normal growth of the bacterium, indicating that the mutant strain is subject to some type of growth slow-down or stress. Genes showing differential expression were further grouped according to their pattern of gene expression under other stress conditions. From this anal. 50 genes were identified which are the most likely to be controlled by RegX3. Most of these genes are of unknown function and no obvious motifs were found upstream of the genes identified. Thus, it has been demonstrated that the senX3-regX3 two-component system is involved in the virulence of M. tuberculosis and a no. of genes controlled by this system have been identified.

OSC.G 61 THERE ARE 61 CAPLUS RECORDS THAT CITE THIS RECORD (61 CITINGS)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Gene, microbial

RL: BSU (Biological study, unclassified); BIOL (Biological study)

( \*\*\*Rv3890c\*\*\* , up-regulation of, in senX3-regX3 deleted mutant;  
senX3-regX3 two-component regulatory system of Mycobacterium  
tuberculosis is required for virulence)

L5 ANSWER 8 OF 9 MEDLINE on STN  
 AN 2001551376 MEDLINE <<LOGINID::20091222>>  
 DN PubMed ID: 11597336  
 TI The ESAT-6 gene cluster of Mycobacterium tuberculosis and other high G+C Gram-positive bacteria.  
 AU Gey Van Pittius N C; Gamielidien J; Hide W; Brown G D; Siezen R J; Beyers A D  
 CS US/MRC Centre for Molecular and Cellular Biology, Department of Medical Biochemistry, University of Stellenbosch, Tygerberg, 7505, South Africa.. ngvp@sun.ac.za  
 SO Genome biology, (2001) Vol. 2, No. 10, pp. RESEARCH0044. Electronic Publication: 2001-09-19.  
 Journal code: 100960660. E-ISSN: 1465-6914.  
 Report No.: NLM-PMC57799.  
 CY England: United Kingdom  
 DT (COMPARATIVE STUDY)  
 Journal; Article; (JOURNAL ARTICLE)  
 (RESEARCH SUPPORT, NON-U.S. GOV'T)  
 (RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)  
 LA English  
 FS Priority Journals  
 EM 200201  
 ED Entered STN: 15 Oct 2001  
 Last Updated on STN: 5 Jan 2003  
 Entered Medline: 10 Jan 2002  
 AB BACKGROUND: The genome of Mycobacterium tuberculosis H37Rv has five copies of a cluster of genes known as the ESAT-6 loci. These clusters contain members of the CFP-10 (lhp) and ESAT-6 (esat-6) gene families (encoding secreted T-cell antigens that lack detectable secretion signals) as well as genes encoding secreted, cell-wall-associated subtilisin-like serine proteases, putative ABC transporters, ATP-binding proteins and other membrane-associated proteins. These membrane-associated and energy-providing proteins may function to secrete members of the ESAT-6 and CFP-10 protein families, and the proteases may be involved in processing the secreted peptide. RESULTS: Finished and unfinished genome sequencing data of 98 publicly available microbial genomes has been analyzed for the presence of orthologs of the ESAT-6 loci. The multiple duplicates of the ESAT-6 gene cluster found in the genome of M. tuberculosis H37Rv are also conserved in the genomes of other mycobacteria, for example M. tuberculosis CDC1551, M. tuberculosis 210, M. bovis, M. leprae, M. avium, and the avirulent strain M. smegmatis. Phylogenetic analyses of the resulting sequences have established the duplication order of the gene clusters and demonstrated that the gene cluster known as region 4 ( \*\*\*Rv3444c\*\*\* -3450c) is ancestral. Region 4 is also the only region for which an ortholog could be found in the genomes of Corynebacterium diphtheriae and Streptomyces coelicolor. CONCLUSIONS: Comparative genomic analysis revealed that the presence of the ESAT-6 gene cluster is a feature of some high-G+C Gram-positive bacteria. Multiple duplications of this cluster have occurred and are maintained only within the genomes of members of the genus Mycobacterium.  
 AB . . . sequences have established the duplication order of the gene clusters and demonstrated that the gene cluster known as region 4 ( \*\*\*Rv3444c\*\*\* -3450c) is ancestral. Region 4 is also the only region for which an ortholog could be found in the genomes of. . .

L5 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2009 ACS on STN  
 AN 2002:211028 CAPLUS <<LOGINID::20091222>>  
 DN 137:211652  
 TI The ESAT-6 gene cluster of Mycobacterium tuberculosis and other high G + C Gram-positive bacteria  
 AU Gey van Pittius, Nico C.; Gamielidien, Junaid; Hide, Winston; Brown, Gordon D.; Siezen, Roland; Beyers, Albert D.  
 CS Dep. Medical Biochemistry, Univ. Stellenbosch, Tygerberg, 7505, S. Afr.  
 SO GenomeBiology [online computer file] (2001), 2(10), No pp. given  
 CODEN: GNBLEW; ISSN: 1465-6914  
 URL: <http://genomebiology.com/2001/2/10/research/0044>  
 PB BioMed Central Ltd.  
 DT Journal; (online computer file)  
 LA English  
 AB Background: The genome of Mycobacterium tuberculosis H37Rv has five copies of a cluster of genes known as the ESAT-6 loci. These clusters contain members of the CFP-10 (lhp) and ESAT-6 (esat-6) gene families (encoding secreted T-cell antigens that lack detectable secretion signals) as well as genes encoding secreted, cell-wall-assocd. subtilisin-like serine proteases, putative ABC transporters, ATP-binding proteins and other membrane-assocd. proteins. These membrane-assocd. and energy-providing proteins may function to secrete members of the ESAT-6 and CFP-10 protein families, and the proteases may be involved in processing the secreted peptide. Results: Finished and unfinished genome sequencing data of 98 publicly available microbial genomes has been analyzed for the presence of orthologs of the ESAT-6 loci. The multiple duplicates of the ESAT-6 gene cluster found in the genome of M. tuberculosis H37Rv are also conserved in the genomes of other mycobacteria, for example M. tuberculosis CDC1551, M. tuberculosis 210, M. bovis, M. leprae, M. avium, and the avirulent strain M. smegmatis. Phylogenetic analyses of the resulting sequences have established the duplication order of the gene clusters and demonstrated that the gene cluster known as region 4 ( \*\*\*Rv3444c\*\*\* -3450c) is ancestral. Region 4 is also the only region for which an ortholog could be found in the genomes of Corynebacterium diphtheriae and Streptomyces coelicolor. Conclusions: Comparative genomic anal. revealed that the presence of the ESAT-6 gene cluster is a feature of some high-G+C Gram-pos. bacteria. Multiple duplications of this cluster have occurred and are maintained only within the genomes of members of the genus Mycobacterium.  
 OSC.G 31 THERE ARE 31 CAPLUS RECORDS THAT CITE THIS RECORD (31 CITINGS)  
 RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT  
 AB . . . sequences have established the duplication order of the gene clusters and demonstrated that the gene cluster known as region 4 ( \*\*\*Rv3444c\*\*\* -3450c) is ancestral. Region 4 is also the only region for which an ortholog could be found in the genomes of. . .  
 IT Mutation  
 (duplication, order of gene clusters; gene cluster known as region 4 ( \*\*\*Rv3444c\*\*\* -3450c) is ancestral; ESAT-6 gene cluster of Mycobacterium tuberculosis and other high G + C Gram-pos. bacteria)